

WHAT IS CLAIMED IS:

1. A lubricating oil composition comprising:
 - (a) a major amount of an oil of lubricating viscosity having a kinematic viscosity at 100°C in a range of about 2 to about 50 mm²/s;
 - (b) a hydrocarbyl succinimide dispersant;
 - (c) a borated hydrocarbyl succinimide dispersant; and
 - (d) a hydrocarbyl succinimide post-treated with a post-treating agent selected from the group consisting of an organic carbonate, an epoxide, a lactone, a hydroxyaliphatic carboxylic acid, and combinations thereof.
2. The lubricating oil composition of claim 1, wherein the major amount of the oil of lubricating viscosity is greater than 50 wt. %, based on the total weight of the lubricating oil composition.
3. The lubricating oil composition of claim 1, wherein the hydrocarbyl group of the hydrocarbyl succinimide dispersant contains from about 12 to about 350 carbon atoms.
4. The lubricating oil composition of claim 1, wherein the hydrocarbyl succinimide dispersant is a polyalkenyl succinimide.
5. The lubricating oil composition of claim 4, wherein the polyalkenyl succinimide is a polyisobutenyl bis-succinimide.
6. The lubricating oil composition of claim 1, wherein the polyisobutenyl bis-succinimide is derived from a polyisobutylene group having a number average molecular weight of about 700 to about 2,500.
7. The lubricating oil composition of claim 1, wherein the borated hydrocarbyl succinimide dispersant is a borated polyalkenyl succinimide.
8. The lubricating oil composition of claim 7, wherein the borated polyalkenyl succinimide is a borated polyisobutenyl bis-succinimide.

9. The lubricating oil composition of claim 1, wherein the borated polyisobutenyl bis-succinimide is derived from a polyisobutylene group having a number average molecular weight of about 700 to about 2,500.

10. The lubricating oil composition of claim 1, wherein the hydrocarbyl succinimide (d) is post-treated with an organic carbonate.

11. The lubricating oil composition of claim 10, wherein the organic carbonate is ethylene carbonate.

12. The lubricating oil composition of claim 1, comprising:

from about 0.5 wt. % to about 12 wt. %, based on the total weight of the lubricating oil composition, of the hydrocarbyl succinimide dispersant;

from about 0.5 wt. % to about 12 wt. %, based on the total weight of the lubricating oil composition, of the borated hydrocarbyl succinimide dispersant; and

from about 0.5 wt. % to about 12 wt. %, based on the total weight of the lubricating oil composition, of the hydrocarbyl succinimide post-treated with a post-treating agent selected from the group consisting of an organic carbonate, an epoxide, a lactone, a hydroxyaliphatic carboxylic acid.

13. The lubricating oil composition of claim 1, wherein a mixture of the hydrocarbyl succinimide dispersant; the borated hydrocarbyl succinimide dispersant; and the hydrocarbyl succinimide post-treated with a post-treating agent selected from the group consisting of an organic carbonate, an epoxide, a lactone, a hydroxyaliphatic carboxylic acid, and combinations thereof provides a total base number (TBN) to the lubricating oil composition of from about 0.5 to about 5.

14. The lubricating oil composition of claim 1, further comprising at least one additive selected from the group consisting of antioxidants, metallic detergents, rust inhibitors, dehazing agents, demulsifying agents, metal deactivating agents, friction modifiers, pour point depressants, antifoaming agents, co-solvents, corrosion-inhibitors, multifunctional agents, dyes, extreme pressure agents and mixtures thereof.

15. A method comprising operating an internal combustion engine with a lubricating oil composition comprising (a) a major amount of an oil of lubricating viscosity having a kinematic viscosity at 100°C in a range of about 2 to about 50 mm²/s; (b) a hydrocarbyl succinimide dispersant; (c) a borated hydrocarbyl succinimide dispersant; and (d) a hydrocarbyl succinimide post-treated with a post-treating agent selected from the group consisting of an organic carbonate, an epoxide, a lactone, a hydroxylaliphatic carboxylic acid, and combinations thereof.

16. The method of claim 15, wherein the hydrocarbyl succinimide is a polyisobutenyl bis-succinimide derived from a polyisobutylene group having a number average molecular weight of about 700 to about 2,500.

17. The method of claim 15, wherein the borated hydrocarbyl succinimide is a borated polyisobutenyl bis-succinimide derived from a polyisobutylene group having a number average molecular weight of about 700 to about 2,500.

18. The method of claim 15, wherein the hydrocarbyl succinimide (d) is post-treated with an organic carbonate which is ethylene carbonate.

19. The method of claim 15, wherein the lubricating oil composition comprises:

from about 0.5 wt. % to about 12 wt. %, based on the total weight of the lubricating oil composition, of the hydrocarbyl succinimide dispersant;

from about 0.5 wt. % to about 12 wt. %, based on the total weight of the lubricating oil composition, of the borated hydrocarbyl succinimide dispersant; and

from about 0.5 wt. % to about 12 wt. %, based on the total weight of the lubricating oil composition, of the hydrocarbyl succinimide post-treated with a post-treating agent selected from the group consisting of an organic carbonate, an epoxide, a lactone, a hydroxylaliphatic carboxylic acid.

20. The method of claim 15, wherein the lubricating oil composition further comprises at least one additive selected from the group consisting of antioxidants, metallic detergents, rust inhibitors, dehazing agents, demulsifying agents, metal deactivating agents, friction modifiers, pour point depressants, antifoaming agents, co-solvents, corrosion-inhibitors, multifunctional agents, dyes, extreme pressure agents and mixtures thereof.